CAT® ARTICULATED TRUCK
TECHNOLOGIES

CAT®

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AVAILABLE FOR SELECT MODELS*

Consult your Cat Dealer for details.

Cat® technologies are designed to provide practical and reliable solutions that work effectively across various job sites. These solutions help maximize productivity, enhance safety, and minimize costs. Whether your fleet consists of one machine or many, Cat technologies give you the competitive edge you need to succeed.

FACTORY-INTEGRATED TECHNOLOGY

The technology designed for Cat articulated trucks has been specifically created, built, and tested to ensure optimal performance. You can expect seamless functionality that cannot be achieved with third-party add-ons.

+ A wide range of technology options are available to enhance operator safety, comfort, and performance.
+ Automated features assist novice operators in achieving greater efficiency with minimal effort and time.
+ Experienced operators can benefit from reduced strain, less fatigue, and faster, more accurate results.

CAT TECHNOLOGY
ELEVATE OPERATOR PRODUCTIVITY

Unlock your equipment's full potential by optimizing every grading pass and operational hour with Cat productivity technology. Experience increased efficiency and performance that will elevate your projects to new heights!

CAT PAYLOAD
GET REAL-TIME PRODUCTION INFORMATION

Cat® Payload for articulated trucks enables optimized hauling potential and maximized productivity. Automated tracking helps site managers monitor material movement and efficiency metrics to manage production, improve jobsite efficiency, and reduce costs.

LOWER COSTS. BOOST PRODUCTIVITY.

+ Payload is calculated by using sensors on the walking beams, displaying to both the machine and loading tool operator when rated payload is achieved.

+ The in-cab monitor displays payload weight and status and external lights automatically signal loader operator when target payload is achieved.

+ Advanced weighing features and easy-to-view display and payload status indicators assist with payload accuracy and speed the loading cycle.

+ Track production from the cab with quick access to daily weights, loads and cycle counts, and totals.

+ Site managers can view payload data online via VisionLink™ to monitor production and efficiency metrics and manage the businesss.

WHAT CAN PAYLOAD DO FOR ME?

+ Real-time payload weighing information and instant feedback keeps haul trucks fully loaded, moving, and reaching maximized production levels – and the fleet working at optimum potential.
+ Load trucks to capacity without overloading; move more material aligning to machine capability and performance.
+ Improve jobsite efficiency, lower costs, and optimize machine use by reducing over- and under-loading, component wear, and cycles.

TRACTION CONTROL
FOR GREATER PRODUCTIVITY

Cat® Traction Control reduces excessive tire slippage under full load conditions and improves undercarriage life. It reduces operator fatigue and increases productivity by providing a smoother reverse pass.

REDUCE TIRE SLIP

The system proactively applies the differential lock to prevent wheel spin. This is achieved through automatic engagement of both the inter- and cross-axle differentials.

MAINTAIN EFFICIENCY

Sensors actively monitor for reduced traction on each wheel and respond proportionally to maintain machine speed and fuel efficiency.

ZERO OPERATOR INPUTS

Traction Control is fully automatic, effectively reducing operator fatigue. This allows them to focus on their work for better productivity.

CAT OPERATOR COACHING
EMPOWER OPERATORS. EXCEED TARGETS.

FOCUS TRAINING

+ Operator Coaching helps operators of all experience levels take their efficiency and productivity to the next level. With tips and data at their fingertips, operators can track and improve their productivity through everyday work on the job site.*

+ Operator Coaching empowers operators to exceed targets by measuring and reporting on behaviors that affect efficiency, production, and component life.

+ Instructional videos provide training on the behaviors that will be measured.

+ The system measures and reports on individual operator behaviors that affect efficiency, prodcution, and component life.

+ Track progress and view data onboard or offboard with VisionLink™.**

Operator Coaching is only available on -05 models.

**A VisionLink subscription is required for offboard data.*

WHAT CAN OPERATOR COACHING DO FOR ME?

+ Identify training opportunities and be intentional with operator education efforts.
+ Enforce good habits of experienced operators and bring new ones up to speed faster.
+ Extend machine life, while reducing unnecessary breaks, failures, and downtime with tips that detect actions that negatively impact machine health.

ASSIST FEATURES
HELP TO FURTHER BOOST OPERATOR EFFICIENCY

Assist features on articulated trucks add semi-autonomous functionality to boost operator efficiency. These systems work in conjunction with Payload, allowing you to optimize your loading applications.

Assisted Hoist – Helps operators of all experience levels maintain optimal hoisting behavior to streamline the dump cycle and reduce machine wear and tear.

Auto Wait Brake with Neutralization* – Automatically applies service brakes when the shift lever is in any position other than PARK and ground speed is 0 mph. This reduces operator fatigue from holding the truck stationary with the brake pedal and saves fuel when shifting to neutral.

Automatic Retarding Control (ARC) – Automatically activates when the operator releases the throttle pedal to maintain machine speed. If the operator keeps the throttle applied during downhill, ARC maybe be forced on to avoid engine overspeed and transmission shifts. ARC actively monitors wheel spin to increase jobsite safety and operator confidence.

Machine Speed Limiting – Allows operators to control the machines top speed, which helps save fuel by limiting runout speed in load and carry applications. Limiting machine speed can also help you comply to safety regulations and best practices.

Tire Pressure Monitoring System – Allows operators to easily monitor tire pressure from the main machine display, helping to improve machine performance, operator ride, and operating costs.

*Auto Wait Brake is only available on -05 models.
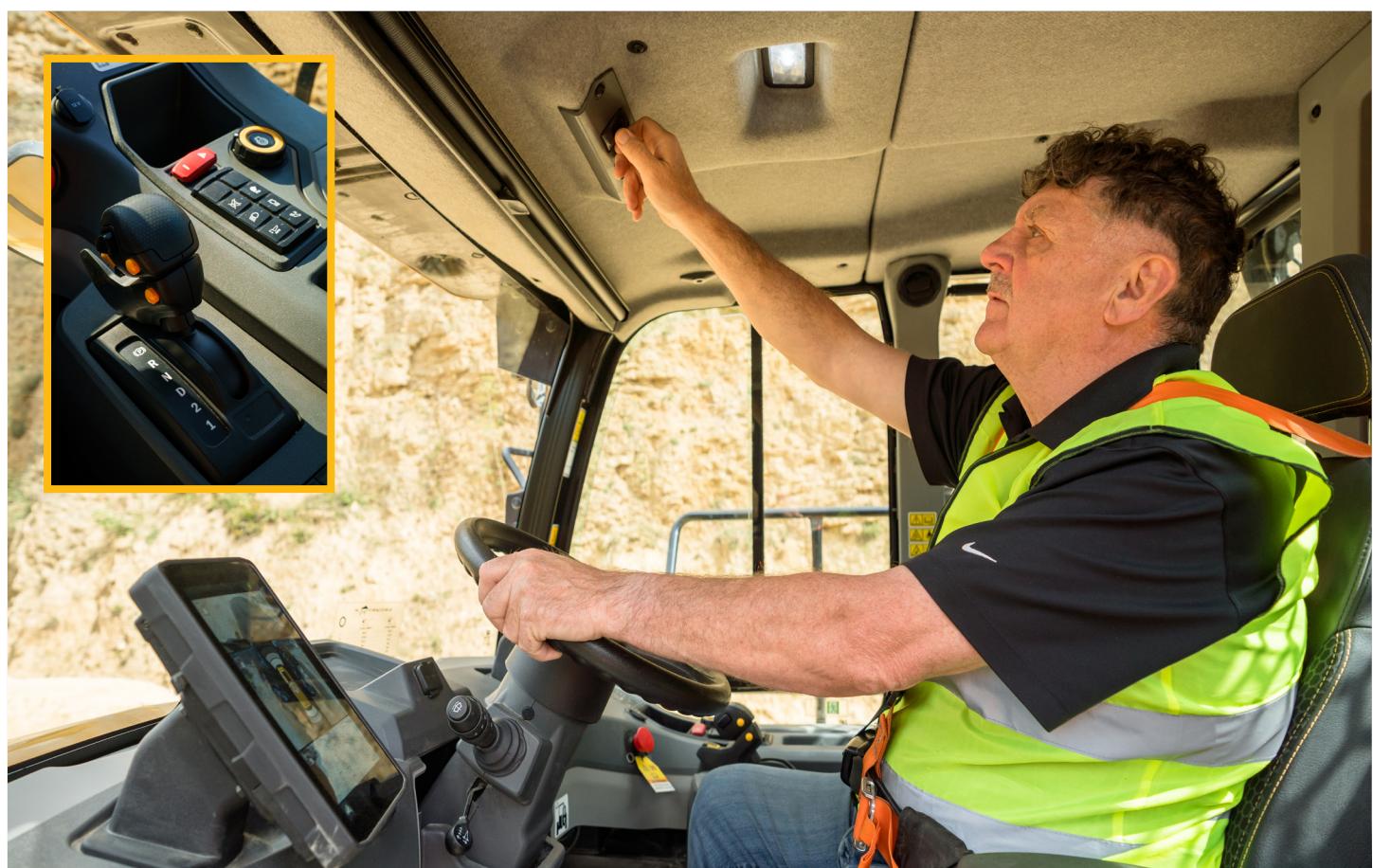
SAFETY-FOCUSED TECHNOLOGIES
PRIORITIZE SAFEY ON YOUR JOBSITE

Maintaining a safe jobsite is crucial for maximizing productivity and minimizing costs. Cat safety technologies help lower risks, allowing operators to perform their tasks effectively.


SEAT BELT REMINDER

The Cat Seat Belt Reminder uses audible and visual alerts to ensure operators stay buckled while operating equipment. This technology detects when the seat belt should be in use by monitoring the machine's parking brake switch.

+ **Helps to Improve Jobsite Safety:** Operators are prompted through audible and visual alerts to stay buckled up, helping to reduce the risk of fatal accidents.
+ **Increased Monitoring:** Safety incidents are captured through VisionLink™ to keep site managers aware of safety compliance.
+ **Optional External Beacon:** An optional, external purple beacon provides a visual alert for those on site to easily monitor potentially unsafe situations. When the machine is in motion and no seat belt is detected, the beacon will illuminate.

THE DRIVER SAFETY SYSTEM (DSS)
TECHNOLOGY THAT CAN SAVE LIVES

DETECTS EYE MOVEMENT

DETECTS HEAD POSITION

DETECTS FACIAL EXPRESSIONS
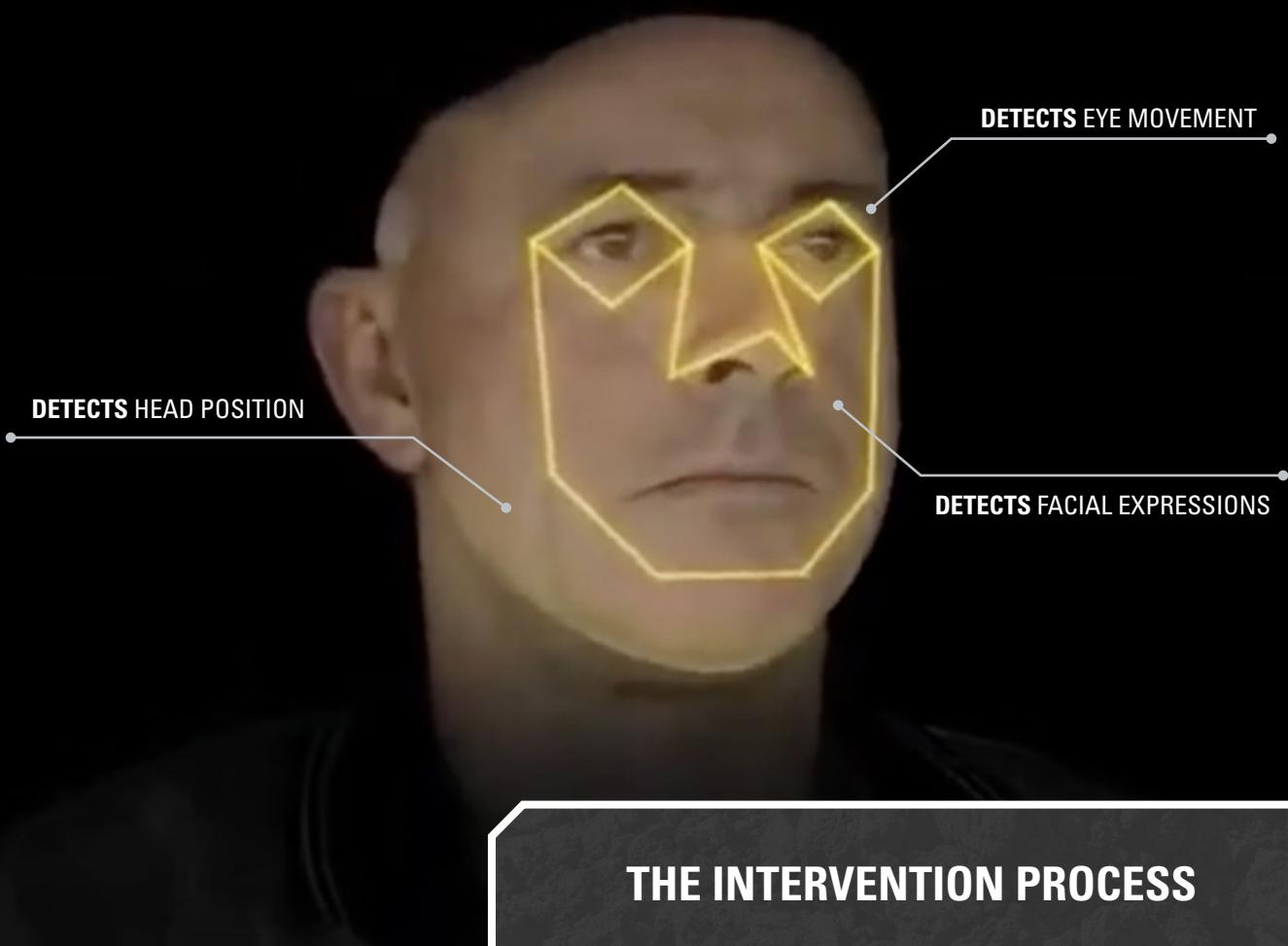
THE INTERVENTION PROCESS

FROM DISTRACTION TO ACTION

The Cat Detect DSS detects operator inattention due to fatigue, distraction, or some other cause. When inattention is detected, the system nudges the operator back to attention, captures event data, and transmits a secure, encrypted event data file to Caterpillar's 24/7 monitoring center. Cat's trained safety advisors confirm, categorize, and classify each event and initiate your company's risk intervention plan.

SAVED FOR THE FUTURE

The DSS system archives the event video clip and other event data from the onboard system and sends them to the DSS back office and monitoring center for confirmation. Confirmed event data can be viewed in the system and used to support safety management reviews.

1 **EVENT DETECTED**
DSS algorithms track the driver's face and eyes for fatigue or distraction and activate alarms when parameters are exceeded, alerting the driver back to attention.

2 **ALERT ACTIVATED**
Once an event is detected, an event file is created, stored, and sent to Caterpillar's monitoring center for review and verification.

3 **ACTION INITIATED**
When an event has been verified, the Caterpillar monitoring center implements a personalized intervention plan tailored to each organization's specific policies and procedures.

CAT DETECT CAMERA SYSTEMS

While Cat motor graders are designed to maximize operator visibility, it can be challenging to constantly monitor what goes on around them. Cat Detect camera systems scale with your jobsite needs to provide increased visibility and help you manage ever-changing conditions that pose unexpected risks that potentially lead to injury or repair costs.

REAR VISION CAMERA

INCREASE VISIBILITY BEHIND THE MACHINE.

Utilize the standard Rear Vision camera to improve operator visibility behind the machine and help reduce blind spots when operating.

+   System uses a rugged, vibration-resistant camera and a dedicated display to give operators a clear view behind the machine.
+   See critical information and alerts while operating.
+   Intended for tight quarters and blind intersections.
+   Rear Vision camera is factory installed standard on all Cat machines.

INCREASE OPERATOR VISIBILITY AND AWARENESS
CAT DETECT WITH SURROUND VISION

The Surround Vision system uses three additional, external cameras and the in-cab display to provide a 360-degree view of the whole area around the machine. Operators can use this optional system to identify potential hazards and help prevent incidents. Available only on -05 models.
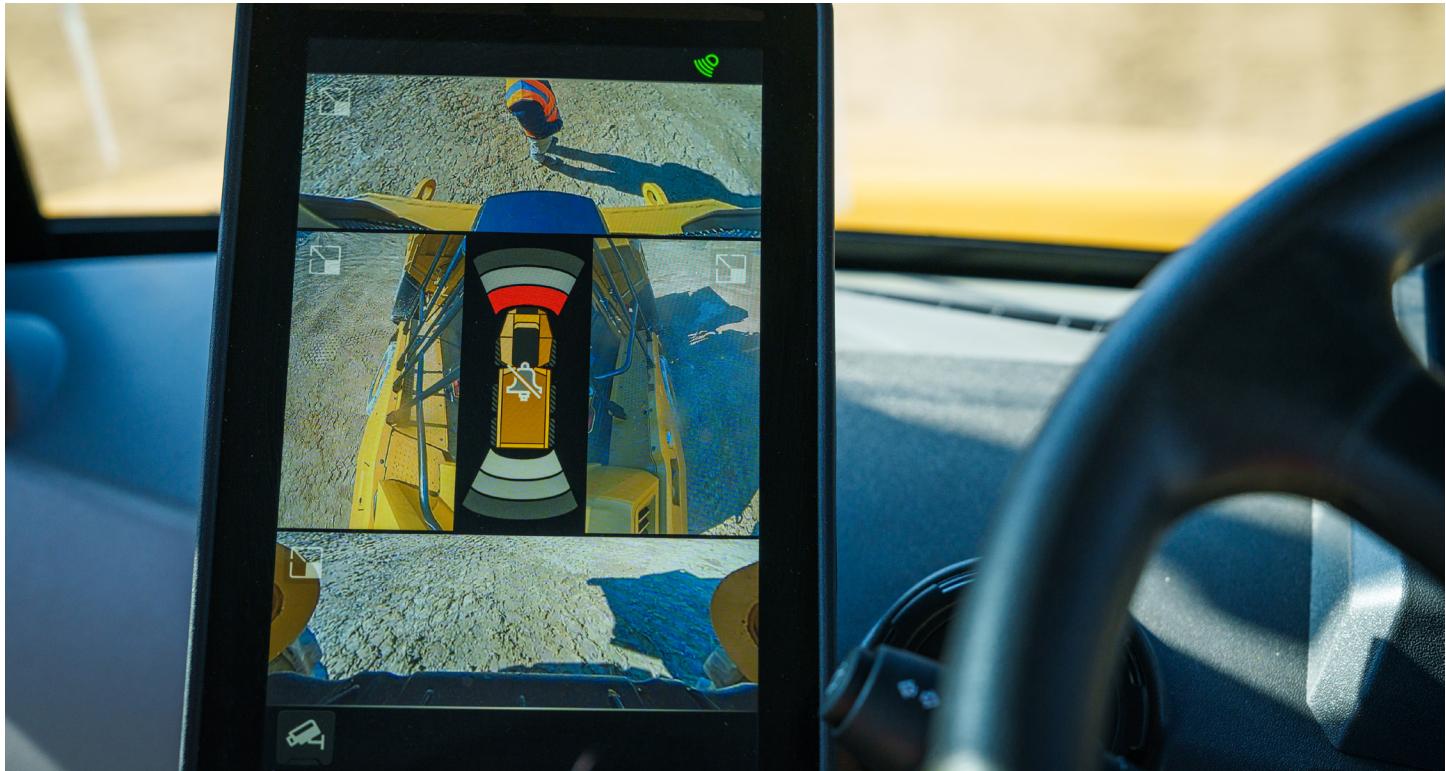

MULTIVIEW CAMERAS

+ The system provides operators with simultaneous views from the front, rear, left, and right cameras.
+ Included are three additional cameras that display a stitched, surround view optimized for rear, front, and side visibility.
+ Reverse movement prompts rear camera to show larger view on the display.

+ Increases awareness of blind spots and jobsite activities to help reduce incidents and maximize productivity.
+ Avoid accidents that possibly result in worker injuries or jobsite shutdowns.
+ Complements other Cat Detect systems to increase vision around the machine.

OBJECT DETECTION

+ Surround Vision also features Object Detection capabillities from integrated front and rear sensors.
+ Audible and visual alerts help to reduce the risk of collisions with static and moving objects.
+ Warning levels change with ground speed, reducing "nuisance" alarms and increasing operator acceptance and awareness.


None | Level 1 | Level 2 | Level 3 | Level 4 | Level 5
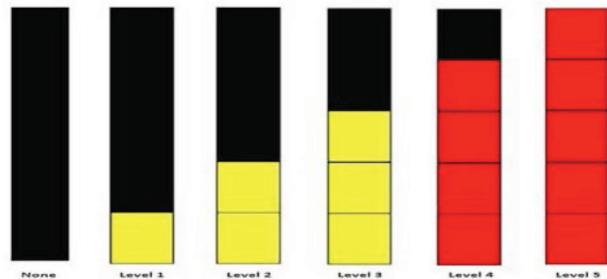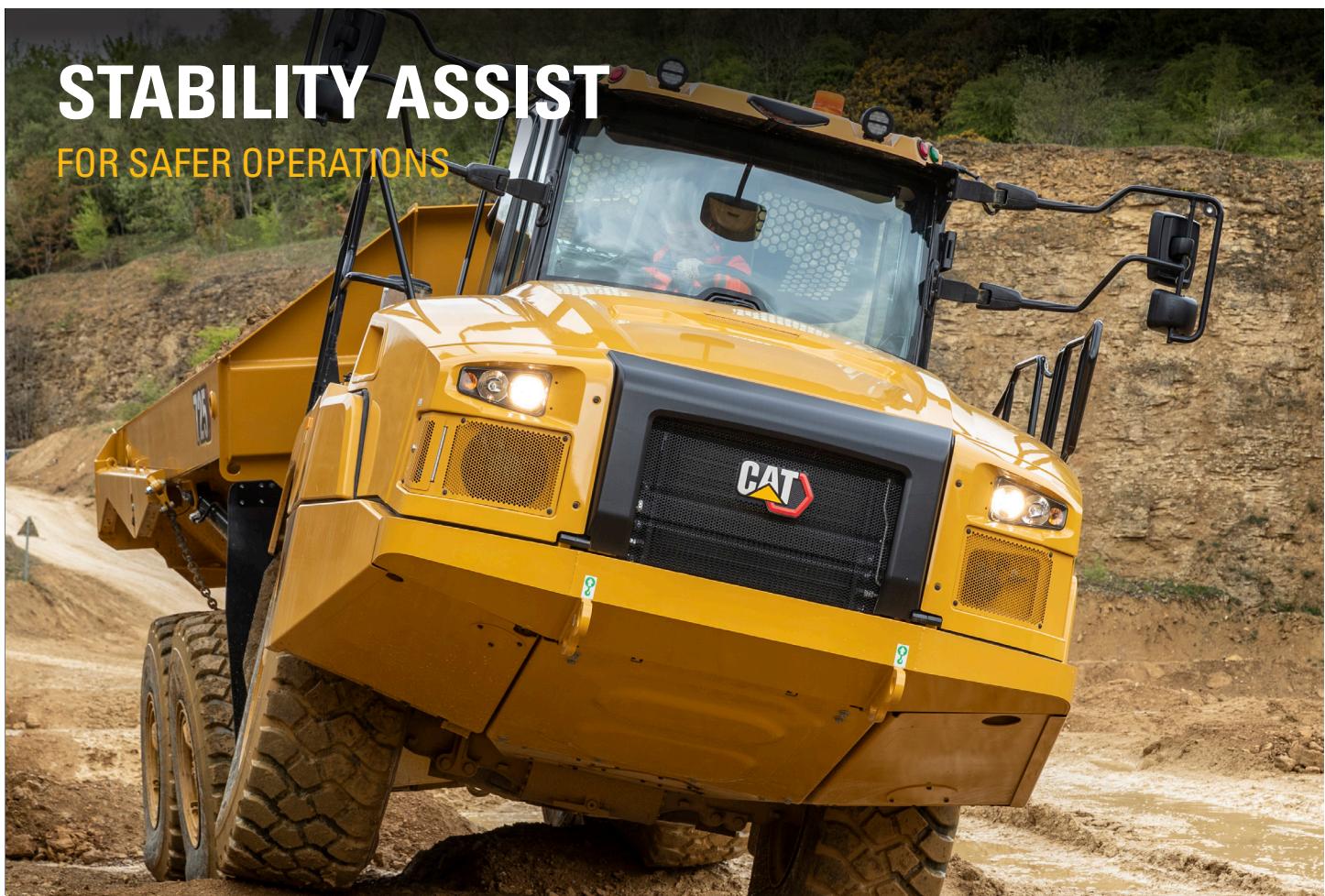
STABILITY ASSIST
FOR SAFER OPERATIONS

Stability Assist warns the operator if the machine approaches an unsafe angle during operation–both when driving and when tipping. If an unsafe angle is detected while tipping, Stability Assist will automatically stop hoisting the body.

+ When the needle goes beyond the safe operating (green) zone, an alarm sounds and the Machine Stability page shows on the display. Hoisting is also prevented when rollover risk is likely.

+ The warning system is disabled above 15kph to avoid false warnings due to machine dynamics. Operators can adjust warning threshold based local jobsite conditions.

+ Log roll-over events and reports via VisionLink™.

DYNAMIC ROLLOVER PROTECTION*

+ Dynamic Rollover Protection detects and warns the operator if the machine approaches a corner too fast. If the system determines the machine is moving at unsafe speeds, it will automatically limit or reduce acceleration.

+ Site managers can view payload data online via VisionLink™ to monitor production and efficiency metrics and manage the businesss.
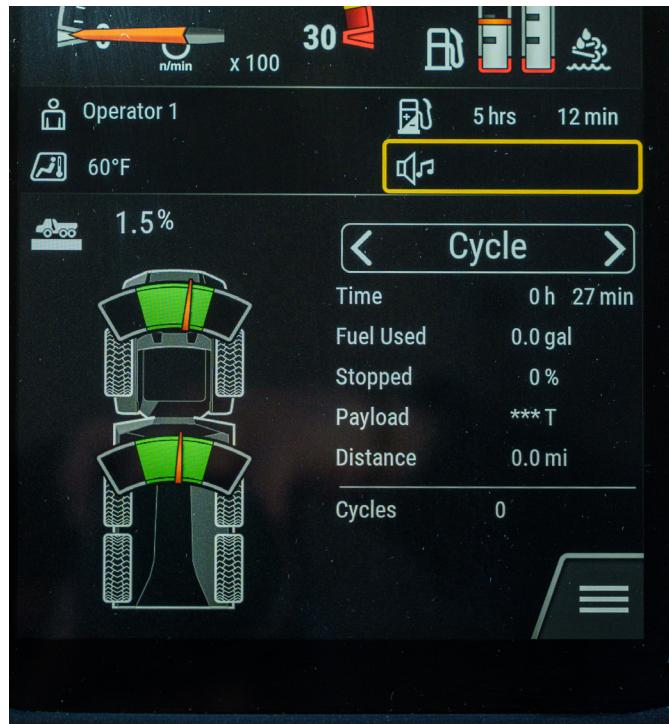
Dynamic Rollover Protection is only available on -05 models.
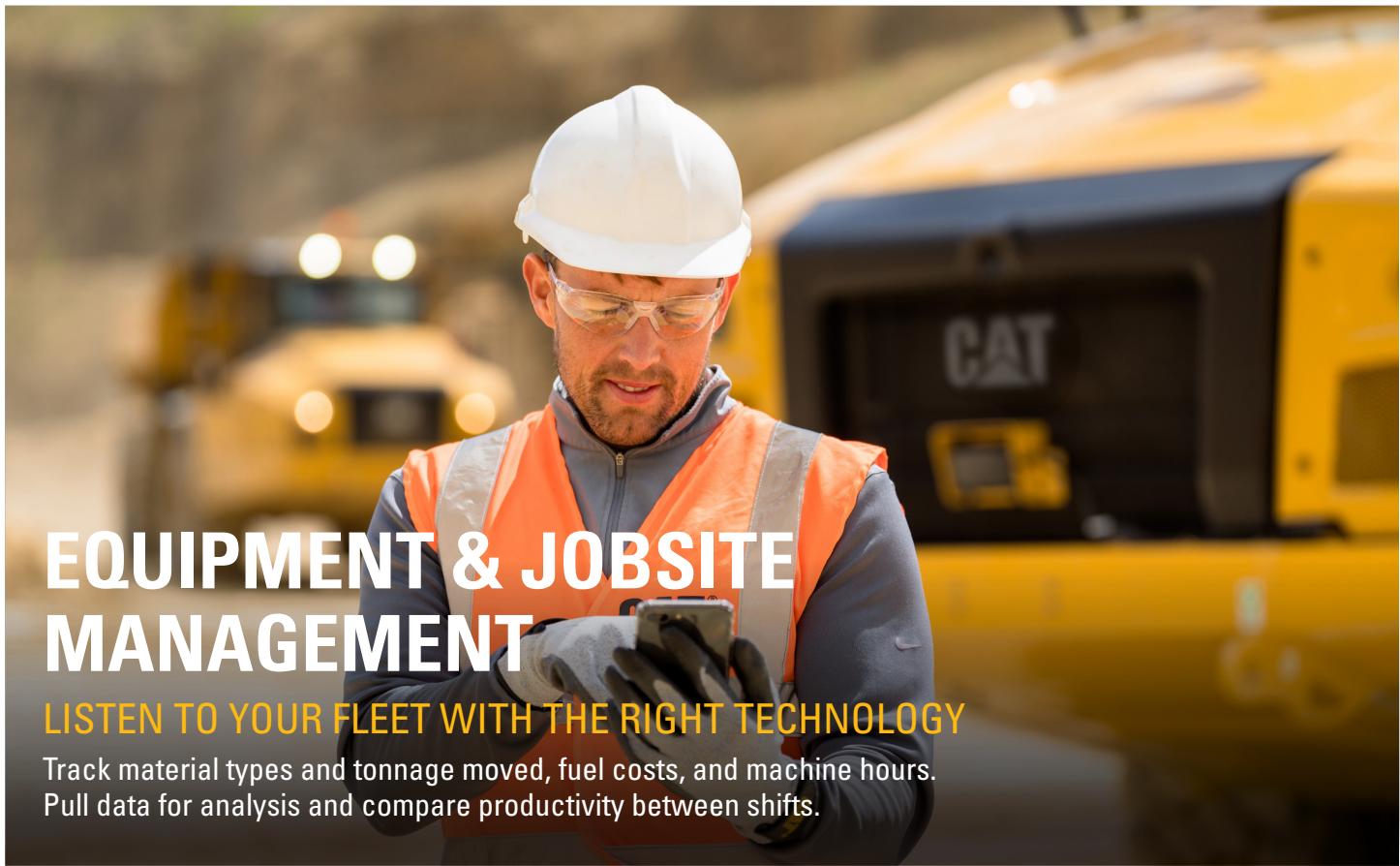
EQUIPMENT & JOBSITE MANAGEMENT

LISTEN TO YOUR FLEET WITH THE RIGHT TECHNOLOGY

Track material types and tonnage moved, fuel costs, and machine hours.
Pull data for analysis and compare productivity between shifts.

CAT INSPECT

Cat Inspect allows you to access your equipment data on your mobile device. This easy-to-use app lets you capture inspection data and integrates with your other Cat data systems so you can keep a close eye on your fleet.

+ **Populates Current Fleet Data**
  Save time with auto-populated equipment information and data.

+ **VisionLink™ Integration**
  Inspection results can be viewed in Cat equipment management applications, making it easier to track machine health.

+ **Save Time with Digital Inspections**
  Digital inspections provide current information for review, retention, sharing, and printing.

CAT REMOTE SERVICES

Cat Remote Services is a suite of technologies that improve jobsite efficiency. Two of its key functions are Remote Troubleshoot and Remote Flash.

+ **Remote Troubleshoot**
  Allows your Cat dealer to perform diagnostic testing on your connected machine remotely, pinpointing potential issues while the machine is in operation. Remote troubleshooting helps to ensure the technician arrives with the correct parts and tools the first time, eliminating additional trips to save you time and money.

+ **Remote Flash**
  Allows you to update onboard software without a technician being present, allowing you to initiate software updates when convenient, increasing your overall operating efficiency.

VISIONLINK™

MACHINE AND JOBSITE DATA AT YOUR FINGERTIPS

VisionLink™ is a flexible and scalable cloud-based application designed to monitor all aspects of your operations, whether for individual machines or multiple interconnected job sites. It analyzes the collected data to provide insights into fleet utilization, identifies potential friction points, and tracks payload production data. With VisionLink, you can make informed decisions that enhance operational efficiency and boost profits.

MAXIMIZE UPTIME

Monitor equipment health, fault codes, fluid analysis, and inspection due dates. Reduce unplanned downtime with critical alerts. Order parts and schedule service within the platform.

ANALYZE PRODUCTION

Track material types and tonnage moved, fuel costs & machine hours. Pull performance data for analysis and compare productivity between shifts.

OPTIMIZE UTILIZATION

Manage assets by projects, groups, or geofences. Set utilization targets and monitor performance. Make informed, data-based decisions to reduce operating costs.

PRIORITIZE SAFETY

Enhance operator awareness and worker vigilance on job sites by utilizing situational awareness alerts to mitigate risks and improve safety protocols.

When you select Cat equipment and technology, you benefit from the support of the largest and most experienced dealer network in the industry.

You gain a partner committed to assisting you and your operation at every stage. Whether you require expert advice or emergency service, your Cat dealer is there for you from day one.

Cat Articulated Truck Technologies May Vary by Region and Model. Consult Your Cat Dealer for Details.

CAT®